IN THE CLAIMS:

1. (Previously Presented) A curable organopolysiloxane resin composition for optical waveguides, said composition comprising:

(A) an organopolysiloxane resin, which is represented by the average unit formula (1):

$$(R^1{}_3SiO_{1/2})_a(R^2{}_2SiO_{2/2})_b(R^3SiO_{3/2})_c(SiO_{4/2})_d \qquad (1)$$

(wherein R^1, R^2, and R^3 stand for one, two, or more kinds of monovalent hydrocarbon groups selected from monovalent aliphatic hydrocarbon groups having 1 to 6 carbon atoms and monovalent aromatic hydrocarbon groups having 6 to 10 carbon atoms, $0<a\leq0.5$, $0\leq b<0.2$, $0.3\leq c<1$, $0\leq d\leq0.4$, $0\leq(b+d)/(a+c)\leq0.25$, and $a+b+c+d=1$) and has three or more monovalent unsaturated aliphatic hydrocarbon groups per molecule, with not less than 10 mol% of the monovalent hydrocarbon groups being monovalent aromatic hydrocarbon groups,

(B) an organosilicon compound having two or more silicon-bonded hydrogen atoms per molecule, with not less than 5 mol% of all the silicon-bonded monovalent substituent groups being monovalent aromatic hydrocarbon groups, and

(C) a hydrosilation catalyst.

2. (Original) The curable organopolysiloxane resin composition for optical waveguides according to claim 1, wherein the viscosity of the composition is not more than 1×10^7 mPa·s at 25°C.

3. (Previously Presented) A curable organopolysiloxane resin composition for optical waveguides, said composition comprising:

(A) an organopolysiloxane resin, which is represented by the average unit formula (1):

$$(R^1{}_3SiO_{1/2})_a(R^2{}_2SiO_{2/2})_b(R^3SiO_{3/2})_c(SiO_{4/2})_d \qquad (1)$$

(wherein R^1, R^2, and R^3 stand for one, two, or more kinds of monovalent hydrocarbon groups selected from monovalent aliphatic hydrocarbon groups having 1 to 6 carbon atoms and monovalent aromatic hydrocarbon groups having 6 to 10 carbon atoms, $0<a\leq0.5$, $0\leq b<0.2$, $0.3\leq c<1$, $0\leq d\leq0.4$, $0\leq(b+d)/(a+c)\leq0.25$, and $a+b+c+d=1$) and has three or more monovalent unsaturated aliphatic hydrocarbon groups per molecule, with not less than 10 mol% of the monovalent hydrocarbon groups being monovalent aromatic hydrocarbon groups,

(B) an organosilicon compound having two or more silicon-bonded hydrogen atoms per molecule, with not less than 5 mol% of all the silicon-bonded monovalent substituent groups being monovalent aromatic hydrocarbon groups,

(C) a hydrosilation catalyst, and

(D) (d1) a solvent or (d2) a hydrosilation-reactive organosiloxane-based diluent.

4. (Previously Presented) An optical waveguide comprising a hydrosilation-cured product of;

(A) an organopolysiloxane resin, which is represented by the average unit formula (1):

$$(R^1{}_3SiO_{1/2})_a(R^2{}_2SiO_{2/2})_b(R^3SiO_{3/2})_c(SiO_{4/2})_d \qquad (1)$$

(wherein R^1, R^2, and R^3 stand for one, two, or more kinds of monovalent hydrocarbon groups selected from monovalent aliphatic hydrocarbon groups having 1 to 6 carbon atoms and monovalent aromatic hydrocarbon groups having 6 to 10 carbon atoms, $0<a\leq0.5$, $0\leq b<0.2$, $0.3\leq c<1$, $0\leq d\leq0.4$, $0\leq(b+d)/(a+c)\leq0.25$, and $a+b+c+d=1$) and has three or more monovalent unsaturated aliphatic hydrocarbon groups per molecule, with not less than 10 mol% of the monovalent hydrocarbon groups being monovalent aromatic hydrocarbon groups, and

(B) an organosilicon compound having two or more silicon-bonded hydrogen atoms per molecule, with not less than 5 mol% of all the silicon-bonded monovalent substituent groups being monovalent aromatic hydrocarbon groups.

5. (Previously Presented) An optical waveguide comprising a hydrosilation-cured product of;

(A) an organopolysiloxane resin, which is represented by the average unit formula (1):

$$(R^1_3SiO_{1/2})_a(R^2_2SiO_{2/2})_b(R^3SiO_{3/2})_c(SiO_{4/2})_d \qquad (1)$$

(wherein R^1, R^2, and R^3 stand for one, two, or more kinds of monovalent hydrocarbon groups selected from monovalent aliphatic hydrocarbon groups having 1 to 6 carbon atoms and monovalent aromatic hydrocarbon groups having 6 to 10 carbon atoms, $0<a\leq0.5$, $0\leq b<0.2$, $0.3\leq c<1$, $0\leq d\leq0.4$, $0\leq(b+d)/(a+c)\leq0.25$, and $a+b+c+d=1$) and has three or more monovalent unsaturated aliphatic hydrocarbon groups per molecule, with not less than 10 mol% of the monovalent hydrocarbon groups being monovalent aromatic hydrocarbon groups,

(B) an organosilicon compound having two or more silicon-bonded hydrogen atoms per molecule, with not less than 5 mol% of all the silicon-bonded monovalent substituent groups being monovalent aromatic hydrocarbon groups, and

(d2) a hydrosilation-reactive organosiloxane-based diluent.

Claims 6-7 (Cancelled)

8. (Previously Presented) The optical waveguide according to claim 4, wherein both a cladding and a core of the optical waveguide comprise a hydrosilation-cured product of component (A) and component (B), with the refractive index of the core being at least 0.1% higher than the refractive index of the cladding.

9. (Previously Presented) The optical waveguide according to claim 5, wherein both a cladding and a core of the optical waveguide comprise a hydrosilation-cured product of

component (A), component (B), and component (d2), with the refractive index of the core being at least 0.1% higher than the refractive index of the cladding.

10. (Original) The optical waveguide according to claim 8, wherein the refractive index difference is regulated by making the total content of monovalent aromatic hydrocarbon groups in component (A) and component (B) used for the core higher than the total content of monovalent aromatic hydrocarbon groups in component (A) and component (B) used for the cladding.

11. (Original) The optical waveguide according to claim 9, wherein the refractive index difference is regulated by making the total content of monovalent aromatic hydrocarbon groups in component (A), component (B), and component (d2) used for the core higher than the total content of monovalent aromatic hydrocarbon groups in component (A), component (B), and component (d2) used for the cladding.

12. (Previously Presented) The optical waveguide according to claim 4, wherein the optical waveguide has a film-like shape.

13. (Previously Presented) A process for fabricating an optical waveguide using the curable organopolysiloxane resin composition of claim 1, wherein the composition is cured by heating.

14. (Previously Presented) A process for fabricating an optical waveguide using the curable organopolysiloxane resin composition of claim 1, wherein the composition is applied to a substrate and cured by heating.

15. (Previously Presented) A process for fabricating a slab optical waveguide, said process comprising;

applying the curable organopolysiloxane resin composition of claim 1 to a substrate and curing by heating, and

applying a second curable organopolysiloxane resin composition, whose cured product has a refractive index at least 0.1% higher than that of the composition of claim 1, to the cured product of the composition of claim 1 and curing the second composition by heating, and

applying the composition of claim 1 to the cured product of the second composition and curing the composition of claim 1 by heating.

16. (Previously Presented) A process for fabricating an optical waveguide, wherein the curable organopolysiloxane resin composition of claim 1 is casted into a mold having a desired inner surface shape and cured by heating.

17. (Previously Presented) A process for fabricating an optical waveguide, said process comprising;

casting the curable organopolysiloxane resin composition of claim 1 into a mold having on its inner surface protrusions corresponding to a core of the optical waveguide and curing by heating,

removing the molding from the mold,

casting a second curable organopolysiloxane resin composition, whose cured product has a refractive index at least 0.1% higher than that of the composition of claim 1, into the hollow portion of the cured product removed from the mold and curing the second composition by heating, and

applying the composition of claim 1 on top of the cured product of the second ~~a~~ composition and the cured product of the composition of claim 1 and curing the composition of claim 1 by heating.

18. (Previously Presented) The optical waveguide according to claim 5, wherein said optical waveguide has a film-like shape.

19. (Previously Presented) A process for fabricating an optical waveguide using the curable organopolysiloxane resin composition of claim 3, wherein the composition is cured by heating.

20. (Previously Presented) A process for fabricating an optical waveguide using the curable organopolysiloxane resin composition of claim 3, wherein the composition is applied to a substrate and cured by heating.

21. (Previously Presented) A process for fabricating a slab optical waveguide, said process comprising;

applying the curable organopolysiloxane resin composition of claim 3 to a substrate and curing by heating, and

applying a second curable organopolysiloxane resin composition, whose cured product has a refractive index at least 0.1% higher than that of the composition of claim 3, to the cured product of the composition of claim 3 and curing the second composition by heating, and

applying the composition of claim 3 to the cured product of the second composition and curing the composition of claim 3 by heating.

22. (Previously Presented) A process for fabricating an optical waveguide, wherein the curable organopolysiloxane resin composition of claim 3 is casted into a mold having a desired inner surface shape and cured by heating.

23. (Previously Presented) A process for fabricating an optical waveguide, said process comprising;

casting the curable organopolysiloxane resin composition of claim 3 into a mold having on its inner surface protrusions corresponding to a core of the optical waveguide and curing by heating,

removing the molding from the mold,

casting a second curable organopolysiloxane resin composition, whose cured product has a refractive index at least 0.1% higher than that of the composition of claim 3, into the hollow portion of the cured product removed from the mold and curing the second composition by heating, and

applying the composition of claim 3 on top of the cured product of the second composition and the cured product of the composition of claim 3 and curing the composition of claim 3 by heating.